Name: _____

Evaluating Composition of Three Functions

A) If $f(x) = e^x$, $g(x) = 8x$ and $h(x) = x^3 + 3$, evaluate the following.

1) $f\left(g\left(h\left(-\frac{1}{2}\right)\right)\right)$

2) $g\left(h\left(f\left(\frac{1}{3}\right)\right)\right)$

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B) If $f(x) = 5x + 2$, $g(x) = x^2 - 1$ and $h(x) = -2$, evaluate the following.

1) $(h \circ g \circ f)\left(\frac{2}{3}\right)$

2) $\left(\right)\left(-1\right)$

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C) If $f(x) = 3 \log_2 x$, $g(x)$

1) $(f \circ (h \circ g))\left(\frac{1}{2}\right)$

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3) Is $(f \circ (h \circ g))\left(\frac{1}{2}\right) = $

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D) 1) If $f(x) = -9$, $g(x) = \dfrac{}{x + 4}$ and $h(x) = x^2 + 8x$, which of the following represents
$h\left(g\left(f\left(-\frac{3}{4}\right)\right)\right)$?

   i) -7 ii) 16 iii) 10 iv) -9

2) If $f(x) = 3\sqrt{x}$, $g(x) = 2x - 7$ and $h(x) = x + 6$, which of the following represents
$(g \circ f \circ h)\left(\frac{1}{4}\right)$?

   i) 11 ii) 8 iii) -13 iv) -8